

10/566236

Patent claims:

IAP20 Rec'd PCT/TTO 27 JAN 2006

1. A method for improving the permeability of the human skin (6) for transdermal delivery of active substances, by means of a plaster (10, 11) which is transparent in at least some areas, contains active substance, and is flexible in at least some areas, and by means of an external light source (1), the plaster (10, 11) comprising at least one active-substance-releasing layer (40) and at least one top layer (12, 13) which contains a multiplicity of optical positive lenses (20-22) organized in a planar arrangement, through which a multiplicity of individual changes (8) improving the permeability of the skin (6) are generated in the stratum corneum (7) of said skin (6) with the aid of light (2) at least briefly impinging on the top layer (12, 13) from at least one light source (1).
20
2. The method as claimed in claim 1, characterized in that the changes (8) in the stratum corneum each lie in the focal points or focal lines of the positive lenses (20-22).
25
3. A plaster for transdermal delivery of active substances, with at least one top layer and at least one self-adhesive layer that contains active substance, characterized in that
30
 - the top layer (12, 13) and the layer (40) containing active substance are transparent in at least some areas, the transparent areas lying over one another inside the plaster (10, 11),
 - the top layer (12, 13) comprises a multiplicity of optical lenses (20-22) organized in a planar arrangement, and

- the focal points of the optical lenses (20-22) lie in the stratum corneum (7) of the skin (6) supporting the plaster.

5 4. The plaster as claimed in claim 3, characterized in that the layer (40) is an adhesive layer, or in that the layer (40), as an exclusively active-substance-containing layer, is provided with an adhesive layer (50) which is permeable to active
10 substance and oriented toward the skin (6).

5. The plaster as claimed in claim 3, characterized in that at least some of the optical lenses (20-22) have different focal lengths.

15 6. The plaster as claimed in claim 3, characterized in that, on that side of the plaster (11) directed away from the human skin (6), shading elevations are arranged on the array of optical lenses (20-
20 22).